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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,291	06/07/2001	David F. Tobias	1001-0179	9539

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EXAMINER

CONNOLLY, MARK A

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/876,291	<b>Applicant(s)</b> TOBIAS ET AL.	
	<b>Examiner</b> Mark Connolly	<b>Art Unit</b> 2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>30 Aug. 2004</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1-28 have been presented for examination.
2. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

#### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-11, 13-24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hetzler<sup>1</sup> US Pat No 5954820 in view of Watts, Jr. et al [Watts] US Pat No 5218704.
5. Referring to claim 1, Hetzler teaches the invention substantially including entering a predetermined performance state as a next performance state, skipping any performance states between a current performance state and the predetermined performance state [Fig. 8, TABLE 2 (col. 7), col. 12 line 64 - col. 13 line 4 and col. 18 lines 37-45]. In summary, when looking at Fig. 8, the system will directly enter the active state P0 from either IDLE state P1 or the power-save mode P2 without entering any intermediate power states.

Although Hetzler teaches entering a predetermined performance state and skipping performance states between the current and predetermined performance states, it is not explicitly taught to determine the utilization of an integrated circuit (IC) and comparing the determined

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<sup>1</sup> As cited in the previous Office Action

activity with a threshold value to determine what power state to enter. Rather, the Hetzler system only states that the system anticipates when to enter the predetermined state and is not specific about how it is determined that more performance is required [Abstract].

Watts explicitly teaches determining utilization of an integrated circuit in order to determine a power state to enter [Abstract]. Although it is not explicitly taught that the Watts system compares the determined utilization to a threshold value, it is obvious that this comparison is made because the value representing the utilization is worthless by itself and therefore requires at least one other value in which to compare it to in order to make a determination as to whether the activity level indicates a busy state, idle state etc... It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Hetzler system to include the teachings of Watts because it would allow the Hetzler system to perform real-time power conservation without affecting the user's perception of the performance or affecting the system application software executing on the computer as taught by Watts.

6. Referring to claim 2, Hetzler teaches entering a maximum performance state [TABLE 2 (col. 7) and fig. 8 and col. 18 lines 37-381]. The SEEK/READ state P0 is the maximum performance state according to TABLE 2.

7. Referring to claims 4 and 5, Hetzler teaches having multiple power modes which are determined according to CPU usage [TABLE 2]. It is therefore obvious that in the Hetzler-Watts system would have multiple threshold values corresponding to each different power mode.

8. Referring to claims 6 and 7, Watts teaches that the power mode can be adjusted by changing the frequency of the CPU [col. 5 lines 11-35].

9. Referring to claim 8, it is obvious that the Hetzler-Watts system determines the utilization periodically in order to adjust the power mode over time.

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10. Referring to claim 9, Watts teaches that the integrated circuit includes a CPU [Abstract].

11. Referring to claim 10, this is rejected on the same basis as set forth hereinabove. Hetzler and Watts teach the method and therefore teach the system performing the method. Furthermore, Hetzler teaches that the system enters the same performance state for all performance increases [fig. 8]. It can be seen that all performance increases result in the system entering performance state P0.

12. Referring to claim 11, this is rejected on the same basis as set forth hereinabove. Hetzler teaches that the method can be performed by microcode which is interpreted as instruction sequences [col. 25 lines 51-55].

13. Referring to claims 12-22, these are rejected on the same basis as set forth hereinabove. Hetzler and Watts teach the method and therefore teach the system performing the method.

14. Referring to claims 23 and 25-28, these are rejected on the same basis as set forth hereinabove. Hetzler teaches that the system can be realized using microcode stored on a computer readable medium [col. 25 lines 51-58].

15. Referring to claim 24, Hetzler teaches that the computer readable medium can come from many different sources [col. 25 lines 54-58].

16. Claims 2, 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hetzler and Watts as applied to claims 1, 3-11, 13-24 and 26-28 above, and further in view of Kawata US Pat No 6076171.

17. Referring to claim 3, although the Hetzler-Watts system teaches adjusting the performance state of the system, it is not explicitly taught adjusting the performance state to a near maximum performance state. Kawata explicitly teaches entering a near maximum

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performance state [Figures 15 and 17 and col. 16 lines 32-56]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the teachings of Kawata into the Hetzler-Watts system because it allows for the system to perform at near maximum levels while still providing some power savings.

18. Referring to claims 12 and 25, these are rejected on the same basis as set forth hereinabove.

### *Conclusion*

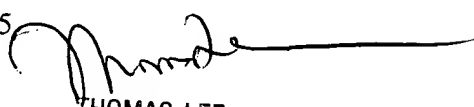
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mc  
December 8, 2004

Mark Connolly  
Examiner  
Art Unit 2115

  
THOMAS LEE  
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